

photocoagulating the feeder vessel to prevent it from feeding blood to the neovascularization

23. A method according to Claim 22, wherein the marker is a fluorescent dye, the region is illuminated by radiation that excites the dye and the first appearance of the dye in the region is detected as an increase in brightness by a predetermined amount above background levels.

24. A method for treating neovascularization according to Claim 22, in a Choroidal Neo-Vascular Membrane (CNVM) in Age-related Macular Degeneration (AMD).

25. A method according to Claim 22, wherein the region is observed by recording a succession of images of the region using an image recorder and subsequently examining the recorded images to identify the location of a feeder vessel feeding blood into the region.

26. A method according to Claim 25, wherein the image recorder captures images at a rate of at least 30 per second.

27. A method according to Claim 25, wherein recording of images of the region is triggered by trigger means associated with the image recorder and sensitive to an increase of the marker in the region.

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28. A method according to Claim 22, wherein the feeder vessel is treated by using a laser.

29. A method according to Claim 22, further comprising introducing a second detectable marker into the circulation of the patient, and detecting the location of the second detectable marker in the region so as to determine the positions of blood vessel walls in the region.

30. A method according to Claim 29, comprising comparing the location of the first appearance of the first detectable marker into the region with the position of the blood vessel walls located by the second detectable marker to determine and/or confirm the location of a feeder vessel feeding blood into the region.

31. A method according to Claim 28, comprising treating the feeder vessel using a laser wherein the waveband of the laser is the same as the absorption peak in the wave band of the second detectable marker.

32. A method according to Claim 22, wherein a change in brightness is measured at the location of the onset of the marker and recorded against time to facilitate determining the location of the earliest onset of the marker into the feeder vessel.

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33. A method according to Claim 32, wherein the change in brightness is recorded graphically.

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34. A method according to Claim 29, wherein an image or images showing the earliest appearance of the first marker is made semi-transparent and then is superimposed on the real-time image in which the second marker is introduced, the presence of the second marker in underlying locations in real-time indicating and confirming the suspected feeder vessel; and absence of the second marker in underlying locations indicating and confirming that the suspected feeder vessel has been coagulated successfully.

35. A method according to Claim 24, wherein the AMD is an exudative form of Age-related Macular Degeneration.

36. A method according to Claim 24, wherein blood supply to the neovascularization in the CNVM is substantially ceased by photocoagulation of a few feeder vessels feeding blood into the neovascularization.

37. A method according to Claim 36, wherein 1-3 feeder vessels are photocoagulated.

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38. A method according to Claim 22, wherein photocoagulation of the feeder vessel is achieved without substantial damage to blood vessels or tissues unrelated to the neovascularization.
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In the Abstract:

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A method for detecting and treating diseases of a type associated with the growth of new blood vessels (neovascularization) in choroidal or subretinal layers of the eye and which can be used for more accurately locating a feeder vessel to the neovascularization and for blocking such a feeder vessel by photocoagulation with a laser.

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